IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No	:	10/005,052
Applicant	:	Monsalve-Gonzalez
Filed	:	December 4, 2001
Title	:	Bran and Bran Containing Products of Improved Flavor and Methods of Preparation
TC/A.U.	:	1794
Examiner	:	Tran Lien, Thuy
Docket No.	:	5553

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REPLY BRIEF

Sir:

The Applicants of the above-identified U.S. patent application submit this Reply to the Examiner's Answer in support of an appeal from the November 24, 2008 rejection of claims 1-3 and 5-48 in this application.

I. Allowable Claims

Initially, the Appellant would like to acknowledge the Examiner's withdrawal of the 35 U.S.C. § 102(e) rejection of claims 1-3, 5-21, 23-26, 33-39, 41 and 48 as anticipated by U.S. Patent No. 6,899,907 to Gonzalez et al. In light of this withdrawal of rejections, independent claim 10, as well as dependent claims 11-15, 37 and 38 should be indicated as allowed.

II. § 103 Rejections

Presently, the Examiner continues to reject claims 1-3, 5-9 and 16-48 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,844,924 to Stanley in view of U.S. Patent No. 4,372,812 to Phillips et al.

A. Claims 37 and 38 should be allowed.

Initially, it should be noted that claim 10 is no longer rejected, and therefore, dependent claims 37 and 38 should no longer be indicated as rejected.

B. Rebuttal of the Examiner's Answer

In general, claim 1 is directed to a method of reducing ferulic acid in bran while increasing vanillin concentrations using mild oxidation with ozone. One of ordinary skill in the art reading Stanley and Phillips would not know how to treat grain to reduce ferulic acid and increase vanillin.

On page 6 of the Examiner's Answer, the Examiner argues that the highly oxidative bleaching in Stanley referenced by the Appellant "is only one embodiment disclosed in Stanley..." See page 10 of the Appeal Brief. However, the Appellant is not arguing that only one particular example of Stanley teaches away from the present invention, but that *all* of the examples of Stanley teach away from the present invention.

The entire teaching of Stanley should be considered when evaluating what information would be imparted to one of ordinary skill in the art. In the present case, Stanley teaches that esterification of corn bran prior to bleaching with peracetic acid or hydrogen peroxide for no less than 120 minutes results in a lighter colored dietary fiber product. The fact that Stanley lists ozone as a conventional bleaching agent does not mean that Stanley teaches bleaching bran only with ozone or, more specifically, reacting bran with 0.1-1.0 parts ozone per 100 parts bran. Certainly, it does not teach one of ordinary skill in the art that ferulic acid can be reduced, and vanillin increased in the manner claimed.

The Examiner also argues that "The time of the reaction is not claimed; thus, it is not an issue to be considered." See page 6 of the response. The Appellant respectfully disagrees. While the claims do not directly require a particular time period, the claims do require that the bran is treated with 0.1-1.0 parts ozone per 100 parts bran to produce treated bran having a reduced ferulic acid finished concentration and an elevated vanillin concentration. Depending on the native ferulic acid content of the bran, the duration of the treatment step will vary but, as set forth on page 15 of the application, the invention works when the treatment step is short and ranges from under a minute to 10 minutes. Excessive treatment drives the oxygenation process so far that vanillin is destroyed. Thus, a prior art reference which discloses bleaching for no less than 120 minutes teaches away from a treatment process which reduces the ferulic acid concentration while elevating vanillin concentrations.

With respect to the Examiner's use of Phillips et al. (hereafter Phillips), the Examiner states that Phillips discloses that, "in ozone bleaching, the reaction is usually carried out at 15-60 degrees C, pH 2-7 for about 5-30 minutes." See pages 6 and 7 of the Answer and column 5, lines 29-38 of Phillips. However, when one considers Phillips as a whole, it is clear that Phillips teaches a multi-step bleaching process for lignocellulosic (woody) pulp including at least a peroxide bleaching stage and the ozone bleaching stage. See column 5, lines 3-4 of Phillips. Phillips does not teach reducing ferulic acid and increasing vanillin in bran. Therefore, it is submitted that one of ordinary skill in the art would not find it apparent to replace the highly oxidative bleaching process taught by

Stanley with only the ozone bleaching step of the multi-step pulp bleaching process of Phillips in order to obtain bran having reduced ferulic acid and increased vanillin.

On page 8 of the Answer, the Examiner states that "the amount of ozone used is an optimizing parameter that is within the determination of one skilled in the art." However, at most, the teachings of Stanley and Phillips would be utilized to optimize bleaching, not vanillin concentrations in bran. Further, the Examiner states that "As to the increasing of the native vanillin and reduction of ferulic [acid], this is an inherent result of the bleaching process and such result is also expected in the prior art process." See page 8 of the Answer. However, the Examiner's assumptions do not constitute the disclosure of prior art, and while Phillips does teach an overlapping concentration of ozone for one part of a multi-step bleaching process, nowhere in the prior art is there a teaching to increase vanillin while decreasing ferulic acid. Further, the means to accomplish optimal bleaching set forth in Stanley and Phillips are not the same as means for increasing vanillin taught by the present invention. Additionally, the Appellant notes that "The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient [to establish inherency.]'... 'That which may be inherent is not necessarily known. Obviousness cannot be predicated on what is unknown.'" *In re Rijckaert*, 9 F.3d 1531, 28 USPQ2d 1955 (Fed. Cir. 1993). The prior art does not impart the knowledge necessary to produce a bran with reduced ferulic acid and increased vanillin. Nor would the prior art processes produce such products inherently, either alone or in combination. Finally, the Examiner is simply wrong on this point as the amount of ozone to bleach in accordance with the prior art does not equate to the 0.1 to 1 parts ozone per 100 parts bran specifically employed to reduce ferulic acid and elevate a finished concentration of vanillin, as evidenced by at least present disclosure concerning the ease of destroying vanillin by excessive oxygenation.

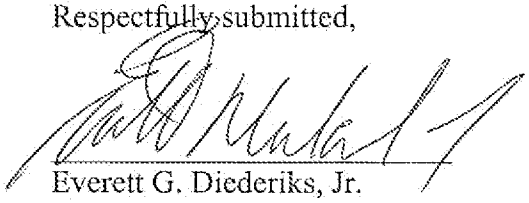
Also on page 8 of the Answer, the Examiner argues that, while Stanley discloses a multiple bleaching process, the process is not limited only to multiple bleaching. Further, the Examiner argues that, because the present claims do not exclude additional steps, the Appellant's argument is not commensurate with the scope of the claims. The Appellant

disagrees, and again notes that the present invention requires reducing ferulic acid while increasing vanillin in bran. The highly oxidative bleaching process taught in Stanley would not result in a bran having increased vanillin. Thus, while the claims of the present invention do not preclude additional steps, they certainly preclude additional steps which would destroy the vanillin content in bran.

On page 9 of the Answer, the Examiner asserts that the prior art teaches the same reaction as the present invention. However, the Examiner admits that Stanley does not disclose the amount of ozone claimed or an elevated finished concentration of vanillin; and Phillips does not teach treating bran or an elevated finished concentration of vanillin. Therefore, the Examiner must set forth an apparent reason for one of ordinary skill in the art to replace the bleaching method taught in Stanley with only one part of a woody pulp bleaching process in Phillips in a manner that would result in bran having elevated vanillin concentrations. In the present case, the Examiner's suggestion that one of ordinary skill in the art would desire to optimize bleaching falls short of identifying a viable rationale that would have led an ordinary skilled artisan from the multi-step highly oxidative bleaching process of Stanley and the highly oxidative pulp-bleaching process of Phillips to a method corresponding to the Appellant's claimed method.

For at least the reasons stated above, as well as the arguments presented in the April 24, 2009 Appeal Brief, the Applicant respectfully requests that the rejection of claims 1-3, 5-9 and 16-48 be reversed, and all of the pending claims passed to issue.

Respectfully submitted,



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